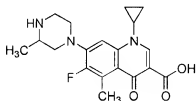


<The structure of pharmaceutically active material of the present invention comprising quinoline-based antimicrobial material and the other material>

1) Grepafloxacin (M.K INDEX 4567)



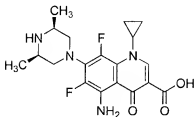
$C_{19}H_{22}FN_3O_3$
Exact Mass: 359.16
Mol. Wt.: 359.39
C, 63.50; H, 6.17; F, 5.29; N, 11.69; O, 13.36

Full name

1- Cyclopropyl-6-fluoro-1,4-dihydro-5-methyl-7-(3-methyl-1-piperazinyl)-4-oxo-3-quinolinecarboxylic acid

Dihydrate, mp : 190 ~ 192 °C

2) Sparfloxacin (M.K INDEX 8884)



$C_{19}H_{22}F_2N_4O_3$
Exact Mass: 392.17
Mol. Wt.: 392.40
C, 58.16; H, 5.65; F, 9.68; N, 14.28; O, 12.23

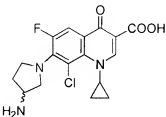
Full name

(cis)-5-amino-1-cyclopropyl-7-(3,5-dimethyl-1-piperazinyl)-6,8-difluoro-1,4-dihydro-4-oxo-3-quinolinecarboxylic acid

Crystal from chloroform+EtOH mp : 266 ~ 269 °C(dec.)

pKa₁ : 6.25, pKa₂ : 9.30

3) Clinafloxacin

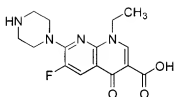


$C_{17}H_{17}ClFN_3O_3$
Exact Mass: 365.09
Mol. Wt.: 365.79
C, 55.82; H, 4.68; Cl, 9.69; F, 5.19; N, 11.49; O, 13.12

Full name :

7-(3-Amino-pyrrolidin-1-yl)-8-chloro-1-cyclopropyl-6-fluoro-4-oxo-1,4-dihydro-quinoline-3-carboxylic acid

4) Enoxacin (M.K INDEX 3625)

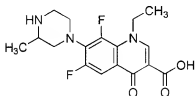


$C_{15}H_{17}FN_4O_3$
 Exact Mass: 320.13
 Mol. Wt.: 320.32
 C, 56.24; H, 5.35; F, 5.93; N, 17.49; O, 14.98

Full name:
 1- Ethyl-6-fluoro-1,4-dihydro-4-oxo-7-(1-piperazinyl)-1,8-naphthyridine-3-carboxylic acid

Crystal from EtOH/MC mp : 220 ~ 224 °C

5) Lomefloxacin (M.K INDEX 5592)



$C_{17}H_{19}F_2N_3O_3$
 Exact Mass: 351.14
 Mol. Wt.: 351.35
 C, 58.11; H, 5.45; F, 10.81; N, 11.96; O, 13.66

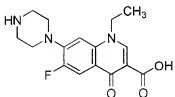
Full name
 1- Ethyl-6,8-difluoro-1,4-dihydro-7-(3-methyl-1-piperazinyl)-4-oxo-3-quinolinecarboxylic acid

2-

Colorless needle from EtOH, mp : 239 ~ 240.5 °C

Colorless needle from water, mp : 290 ~ 300 °C (dec.)

6) Norfloxacin (M. K INDEX 6793)



$C_{16}H_{18}FN_3O_3$
 Exact Mass: 319.13
 Mol. Wt.: 319.33
 C, 60.18; H, 5.68; F, 5.95; N, 13.16; O, 15.03

Full name :
 1- Ethyl-6-fluoro-1,4-dihydro-4-oxo-7-(1-piperazinyl)-3-quinolinecarboxylic acid

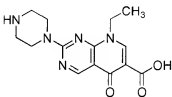
White to light-yellow crystalline powder mp : 220 ~ 221 °C

Soly at 25 °C (mg/ml) : water 0.28, MeOH 0.98, EtOH 1.9, Acetone 5.1, Chloroform 5.5, diethyl ether 0.01, benzene 0.15, EA 0.94, octyl alcohol 5.1, glacial AcOH 340

Solubility in water is pH dependent, increasing sharply at pH<5 or pH>10

Hygroscopic in air, forms hemihydrate

7) Pipemidic Acid (M.K INDEX 7613)



$C_{14}H_{17}N_5O_3$
 Exact Mass: 303.13
 Mol. Wt.: 303.32
 C, 55.44; H, 5.65; N, 23.09; O, 15.82

Full name :

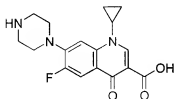
8-Ethyl-5,8-dihydro-5-oxo-2-(1-piperazinyl)pyrido[2,3-d]pyrimidine-6-carboxylic acid

Yellowish-white, odorless, bitter tasting crystal. mp : 253 ~ 255°C

Hygroscopic, yellows slowly in light, Sol in acid soln and alkaline. Very slightly sol in water, alcohol : slightly in chloroform(0.5%), MeOH(0.4%); Partially insol in ether, benzene

Trihydrate, nearly colorless needles m.p : 253 ~ 255°C

8) Ciprofloxacin (M.K INDEX 2374)



$C_{17}H_{18}FN_3O_3$
Exact Mass: 331.13
Mol. Wt.: 331.34

C, 61.62; H, 5.48; F, 5.73; N, 12.68; O, 14.49

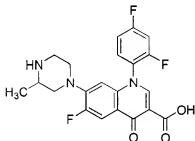
Full name

1- Cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-7-(1-piperazinyl)-3-quinolinecarboxylic acid

Dec 255 ~ 257°C

cf Monohydrochloride monohydrate : Light yellow crystalline powder, mp : 318 ~ 320°C

9) Temafloxacin(M.K INDEX 9284)



$C_{21}H_{18}F_3N_3O_3$
Exact Mass: 417.13
Mol. Wt.: 417.38

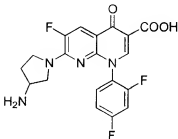
C, 60.43; H, 4.35; F, 13.66; N, 10.07; O, 11.50

Full name :

1-(2,4-Difluorophenyl)-6-fluoro-1,4-dihydro-(3-methyl-1-piperazinyl)-4-oxo-3-quinolinecarboxylic acid

Hydrochloride

10) Tosufloxacin



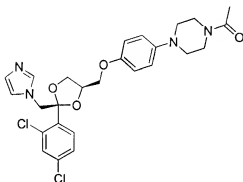
$C_{19}H_{15}F_3N_4O_3$
Exact Mass: 404.11
Mol. Wt.: 404.34

C, 56.44; H, 3.74; F, 14.10; N, 13.86; O, 11.87

Full name :

7-(3-Amino-pyrrolidin-1-yl)-1-(2,4-difluoro-phenyl)-6-fluoro-4-oxo-1,4-dihydro-[1,8]naphthyridine-3-carboxylic acid

11) Ketoconazole

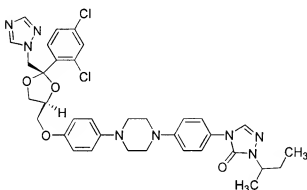


$C_{26}H_{28}Cl_2N_4O_4$
Exact Mass: 530.15
Mol. Wt.: 531.43
C, 58.76; H, 5.31; Cl, 13.34; N, 10.54; O, 12.04

Full name :

1-(4-{4-[2-(2,4-Dichloro-phenyl)-2-imidazol-1-ylmethyl-[1,3]dioxolan-4-ylmethoxy]-phenyl}-piperazin-1-yl)-ethanone

12) Itraconazole

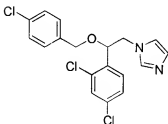


$C_{35}H_{38}Cl_2N_8O_4$
Exact Mass: 704.24
Mol. Wt.: 705.63
C, 59.57; H, 5.43; Cl, 10.05; N, 15.88; O, 9.07

Full name :

2-sec-Butyl-4-[4-(4-[2-(2,4-dichloro-phenyl)-2-[1,2,4]triazol-1-ylmethyl]-[1,3]dioxolan-4-ylmethoxy)-phenyl]-piperazin-1-yl)-phenyl]-2,4-dihydro-[1,2,4]triazol-3-one

13) Econazole

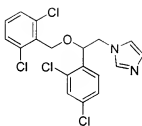


$C_{18}H_{15}Cl_3N_2O$
Exact Mass: 380.02
Mol. Wt.: 381.68
C, 56.64; H, 3.96; Cl, 27.87; N, 7.34; O, 4.19

Full name :

1-[2-(4-Chloro-benzoyloxy)-2-(2,4-dichloro-phenyl)-ethyl]-1H-imidazole

14) Isoconazole

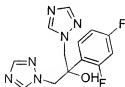


$C_{18}H_{14}Cl_4N_2O$
 Exact Mass: 413.99
 Mol. Wt.: 416.13
 C, 51.95; H, 3.39; Cl, 34.08; N, 6.73; O, 3.84

Full name :

1-[2-(2,6-Dichloro-benzyloxy)-2-(2,4-dichloro-phenyl)-ethyl]-1H-imidazole

15) Fluconazole

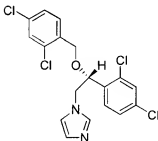


$C_{13}H_{12}F_2N_6O$
 Exact Mass: 306.10
 Mol. Wt.: 306.27
 C, 50.98; H, 3.95; F, 12.41; N, 27.44; O, 5.22

Full name :

2-(2,4-Difluoro-phenyl)-1,3-bis-[1,2,4]triazol-1-yl-propan-2-ol

16) Miconazole

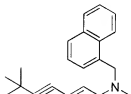


$C_{18}H_{14}Cl_4N_2O$
 Exact Mass: 413.99
 Mol. Wt.: 416.13
 C, 51.95; H, 3.39; Cl, 34.08; N, 6.73; O, 3.84

Full name :

1-[2-(2,4-Dichloro-benzyloxy)-2-(2,4-dichloro-phenyl)-ethyl]-1H-imidazole

17) Terbinafin

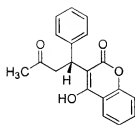


$C_{21}H_{25}N$
 Exact Mass: 291.20
 Mol. Wt.: 291.43
 C, 86.55; H, 8.65; N, 4.81

Full name :

(6,6-Dimethyl-hept-2-en-4-ynyl)-methyl-naphthalen-1-ylmethyl-amine

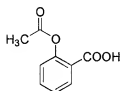
18) Warfarin



$C_{19}H_{16}O_4$
 Exact Mass: 308.10
 Mol. Wt.: 308.33
 C, 74.01; H, 5.23; O, 20.76

Full name :
 4-Hydroxy-3-(3-oxo-1-phenyl-butyl)-chromen-2-one

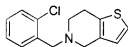
19) Aspirin



$C_9H_8O_4$
 Exact Mass: 180.04
 Mol. Wt.: 180.16
 C, 60.00; H, 4.48; O, 35.52

Full name :
 2-Acetoxy-benzoic acid

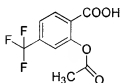
20) Ticlopidine



$C_{14}H_{14}ClNS$
 Exact Mass: 263.05
 Mol. Wt.: 263.79
 C, 63.74; H, 5.35; Cl, 13.44; N, 5.31; S, 12.16

Full name :
 5-(2-Chloro-benzyl)-4,5,6,7-tetrahydro-thieno[3,2-c]pyridine

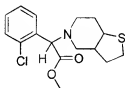
21) Triflusal



$C_{10}H_7F_3O_4$
 Exact Mass: 248.03
 Mol. Wt.: 248.16
 C, 48.40; H, 2.84; F, 22.97; O, 25.79

Full name :
 2-Acetoxy-4-trifluoromethyl-benzoic acid

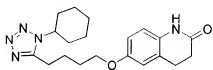
22) Clopidogrel



$C_{16}H_{20}ClNO_2S$
 Exact Mass: 325.09
 Mol. Wt.: 325.85
 C, 58.97; H, 6.19; Cl, 10.88; N, 4.30; O, 9.82; S, 9.84

Full name :
 (2-Chloro-phenyl)-(hexahydro-thieno[3,2-c]pyridin-5-yl)-acetic acid methyl ester

23) Cilostazole



$C_{20}H_{27}N_5O_2$
Mol. Wt.: 369.46

Full name :

6-[4-(1-Cyclohexyl-1H-tetrazol-5-yl)-butoxy]-3,4-dihydro-1H-quinolin-2-one